

PHILOSOPHICAL TRANSACTIONS.

April 25. 1670.

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AN EXTRACT

Of a Letter written by Monsieur de Martel of Montauban to the Publisher, concerning a way for the Prolongation of Humane Life, together with some Observations made in the Southern parts of France; English'd as follows.

SIR, Since you'll have me say something to you of my present Engagements and Studies, I shall tell you, that I retain still my former inclination to Philosophy, and to search after

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Truths,

Truths, either useful to Humane Life, or improving the understanding of Man: But by reason of many troublesome Avocations, I cannot apply myself to it but by Fits and Intervals; and I must stay for a better time, and more favourable opportunities, to comply with my genius. All I can do at present, is, to make Reflexions upon some Experiments, in the doing of which I find I am more particularly engaged in those, which regard our health; concerning which, I employ much of that time I can redeem from the business of my Voyages; wherein, when I am alone, I frequently entertain my self with *that* Subject. And in reference to it, I shall now declare unto you, under the favour of Philosophical liberty, and your friendship, a thought of mine, much possessing my mind, but perhaps one of the most extravagant in the judgement of the Vulgar.

After I had often reflected upon the general causes of Diseases that lead to Death, I mean those of the Debilitation of Nature's strength in the course of mans life, until its utter extinction, and of the causes of a merely natural Death, by the failure of that strength in an extreme decrepit Age, without the concurrence of any excess or external cause; I have entertain'd some conjecture, that if we were more intelligent in this matter, than we are, we might procure for our selves an Age of continual Youth; setting aside the several Accidents of Divine Providence, and merely considering the forces of Nature, not only not hinder'd, but also assisted as much as may be.

A certain Philosopher hath formerly been upon the same thing. and *Cardan* affirms, that being young, this fancy rolled in his head; and the *Chinese* search for it with an extreme industry; but neither those, that have recorded that of the ancient Philosopher, nor *Cardan*, have said any thing of the ground of their notion, nor of the way which they thought was to be observed for attaining the end thereof. *Ne videar insanire sine ratione*, I will tell you, what it is, I have grounded my conjecture upon.

Searching for the true causes of old Age, and of natural Death, I was not satisfied with that extinction of natural heat and desiccation of the Radical humour, assign'd to be the cause thereof, nor with the causes of this extinction and desiccation,
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that are commonly alledged; it being supposed, that this hot and moist principle of Life, in its own nature dissipable in the course of Life, not being perfectly repaired by food, is considerably diminished, which brings old Age, and is at last quite consumed, which causeth natural Death; where Authors make a great difference between the *Seminal* heat and moisture, and that which comes from Aliments; so that, *say they*, the former cannot be repair'd by the latter, as being heterogeneous. Which to me seems not to be true; for, doth not this *Seminal* heat and moisture originally proceed from what is superfluous of the third Concoction of the Aliments? It is therefore of the same nature; and nothing hinders, but what is dissipated thereof may be perfectly restor'd by good nourishment, well prepar'd, and taken seasonably and in due quantity. Whence it may be justly concluded, that the defect of repairing this principle of Life comes not from its nature, not reparable this way, but from something else.

The illustrious *Bacon*, finding the weakness of this supposition, did conceive, that this fault came from the unequal reparation of the liquid or soft, and the dry or more solid parts, which jointly serve to maintain and repair themselves; whence it comes to pass, that the most easie to repair, and the most necessary for Life, as the Blood, cease at last to be sufficiently repair'd by the defect of the others, which are not repair'd at all.

Sanctorius, being almost of the same sentiment, holds, that natural Death happens, because the Fibres do so dry up, that they can no more be renew'd; he making the maintenance of life to depend from the renovation of the parts. Which doth not satisfy me neither, because even the Bones themselves, which are the hardest parts, are capable of renovation in old Age; in regard that old Oxen, which we often eat, have, at certain times (I say not of the Moon, according to the common opinion) their Bones of the same place altogether dry and marrow-less, and at other times bedewed with a substance of the nature of marrow, wherewith they are then fill'd, which enlargeth their pores as of a fine Sponge, and softens them; which then especially comes to pass, after they have fed upon good pasture

in the Spring We must therefore inquire into other more true causes of old Age and Death, which to me seem to be the following.

I suppose, that the Blood is the principle of life, as far as 'tis vital, that is, in motion by the hot particles contained therein; so that those, who expire by Age, do not dye for being destitute of blood, which is found abundant and laudable enough in their vessels, and which hath been sufficiently repaired till then; but because it ceaseth to be vital, by reason of the too easie dissipation of the igneous particles, which make it such: Which, in my opinion, comes to pass, as it doth in Wine, which evaporates and loseth its strength by the fault of the Vessel, which by some opening or other gives passage to what gives vertue to the Wine. The Tunicles and Membranes of the Veins and Arteries which inclose the blood, wear in time away and wax thin, and their Texture gives, and breaks in several places, at which apertures the igneous particles abandon the blood: As in Stuffs and Cloth (whose woof is in a manner like that of the Tunicles) the Threds by wearing do loosen, and break, insomuch that many holes are made in it as in a Sieve. So that, if we had the Art to reinforce and to strengthen anew those Coats and Membranes, that they might not let slip what maketh the blood vital, the life would be preserved perpetually. For a proof of which, this may serve for the present, that the life of many dying persons is maintain'd, for some time, by making them swallow some hot and spirituous liquor, as spirit of Wine, or some Effence, by which the blood is fortified and quickned for some moments: But as this reinforcement of life, conveyed to the heart, and running into the Veins, soon slips out, so also this new vigor passeth away quickly.

As there is no reason to despair of finding out such Medicins, or Aliments, as are proper to strengthen the Coats and Membranes of the Vessels, so as they may at all times retain the fiery and spirituous corpuscles of the blood, as well as in the time of Youth; We may also hope to be enabled to maintain the blood in a condition alwayes to furnish alike, as in our vigorous Age, for all the functions of life: The Engine of our body being not unlike to a Chymists Furnace, which at first well retaining the
heat,

heat, is very proper for the operations of Art; but at last, chinks and crevices being made therein, it ceases to be so, the heat getting away through them, what fire soever you kindle therein.

I shall say no more of it, the Sequel of what I have said going very far, if it be true. In the mean time, if you think it not contemptible, I shall send you all what I have meditated upon it, at large, and in the form of a just Volume.

Although this Discourse exceeds already the bounds of a Letter, yet to satisfy your curiosity, I shall add some few Observations, I have met with in these parts.

First, Returning from *Montpeliers*, I went purposely to *Frontignac* in the last Vintage, to give you an account of the manner, how they make their *Muscadin-Wine*. They let the Grapes grow half dry upon the Vine, and as soon as they are gather'd, they tread and press them immediately, and Tun up the liquor, without letting it stand and work in the Fat, the Lee causing its goodness. Thus is made the true genuine Muscadine, without mixing any other sort of Grape with it. Lately a certain person thought fit to pass White-Wine of another kind upon the mark or husks (which are wont to be cast away) of the Muscadine Grapes, and hath made in this manner an excellent Wine, which hath the taste of Muscadine, and is more pleasing to some, nor is so heady, as the franc or true Muscadine.

Secondly, Upon the way of *Beziers* to *Narbonne*, in a place pretty large, raised by estimation above the level of the Sea, (which is two Leagues distant from it) about 15 or 16 fathoms, I saw Rocks, which inclosed a good number of big Oysters petrify'd: And upon the same way above the place, which is call'd *Nice*, at the highest place of the descent, very cragged, where the Rock is cut to make a passage, is seen a Bed, two foot large, of many Cockle-shells petrify'd, heap'd up, as ordinarily they are on the Sea-shoar; which notes sufficiently, that the Sea formerly cover'd this place, according to what *Aristotle* somewhere saith, *Ubi nunc est Arida, olim Mare fuit*.

Thirdly, We met lately with a Body, which being opened, the Liquor, which is contain'd in the *Pericardium*, or the Bag of the Heart, was found congealed into a consistence fit to be cut with a Knife, and two square fingers thick about the Heart. I know not, whether this Observation be rare: But it is time to conclude with the assurance of my being, &c.

At Montauban,
Dec. 4. 1669.

AN OBSERVATION

of *M. Adrian Azout*, a French Philosopher, made in Rome (where he now is) about the beginning of this Year 1670. concerning the Declination of the Magnet: Out of an Italian printed Paper, English'd by the Publisher, as follows.

THe Declination of the Load-stone hath for many Years been observ'd not to continue alwayes the same in the same places; and the Variation to be such, that it can be no longer imputed to any defect in the Observations, as it was believed at first, when it was not very great: It hath been noted, some Years since, that the Magnetick Needle, which almost everywhere had declin'd Eastward to 8, 10, and 12 degrees (as may be seen in *P. Kircher*, and *P. Riccioli*) after its diminishing little by little as far as to the Meridian, began to decline West-ward.

M. Adrian Azout, a great Searcher of the more considerable Effects of Nature, hath made here in Rome the following Observation about the Declination of the Load-stone, on many Meridian lines drawn as exactly as possibly he could (in a place, where he hath not all the conveniency for this performance) with a Needle, three quarters of a Palm
 * This is about
 six Inches. * long; and on all the lines it was seen to decline somewhat more than two degrees West-ward, and on some, near two degrees and an half.

And that the Observation might be the surer, he drew parallel Lines in divers places, to see whether there were any Iron or Bricks near the Marble, on which he had described the Lines, that might have some influence upon the Needle;